

5.0 CHAPTER 5 PHASED PROJECT IMPLEMENTATION

This chapter describes the proposed phases for the Preferred Alternative and documents that all applicable environmental laws and requirements will be adhered to for each of the project phases before and after construction.

Both Build Alternatives, described in detail in **Chapter 2 – Alternatives**, could be implemented using the phased Record of Decision (ROD) approach, and the ability to define phases was not a factor in the identification of the Preferred Alternative.

The Preferred Alternative is estimated to cost approximately \$760.5 million (based on preliminary design estimates in 2010 dollars) —including design, right-of-way (ROW) acquisition, and construction — which is more than the amount currently available in the Pueblo Area Council of Government (PACOG) Fiscally Constrained Plan in the *Pueblo Area 2035 Long Range Transportation Plan* (PACOG, 2008), referred to as the Pueblo Regional Transportation Plan. Because the Federal Highway Administration (FHWA) can approve in a ROD only those project improvements that are included in the Fiscally Constrained Plan, a phased approach is necessary. As stated in 23 Code of Federal Regulations (CFR) 771.111(f), project phases must connect logical termini and be of sufficient length to address environmental matters on a broad scope, have independent utility in that they would be a usable and a reasonable expenditure even if no additional transportation improvements in the area are made, and should not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements. Using this approach, which allows for disclosure and discussion of project phasing during the NEPA process, additional detail is provided regarding phasing, as an enhancement to the typical NEPA process because only what is included in the Fiscally Constrained Plan can be approved in the ROD. Each additional phase of the project will need to be included in the 20-year Fiscally Constrained Plan as additional project phases are funded, with at least a portion placed in the Statewide Transportation Improvement Program (STIP). This process, including the preparation of a ROD for each project phase along with the opportunity for the public to comment, will be repeated until construction of the entire Preferred Alternative identified in the Final Environmental Impact Statement (FEIS) is completed.

To accommodate these funding limitations, the Preferred Alternative has been divided into two phases: Phase 1 and Phase 2. In selecting project phases, care was taken to ensure that each phase demonstrates independent utility; that is, it can be constructed and function independently without other phases or improvements. Phase 1 consists of improvements planned from approximately the Ilex interchange north to 29th Street and connecting the I-25 mainline improvements to those previously completed just north of 29th Street. Smaller projects within this phase could be completed individually and are described in Section 5.2.1. Phase 1 would cost between \$300 and \$315 million (2010 dollars) and is proposed as the initial phase for the first ROD. Phase 2 would be constructed over time and as funding becomes available; this phase is described in this chapter in concept. Implementation of future phases may not occur if funding beyond the initial phase cannot be identified. Neither phase would restrict the consideration of alternatives for other reasonably foreseeable transportation improvements.

After the FEIS has been made available to the public and the review period concludes, FHWA and the Colorado Department of Transportation (CDOT) will decide whether to select an initial phase for the first ROD. Subsequent RODs will take into consideration the FEIS, the preceding RODs, and any environmental reevaluations that may have been performed. Phase 2 does not necessarily need to be selected in its entirety in subsequent RODs. This will be determined at the time of a subsequent ROD, considering available funding, priorities at that time, and the results of any reevaluation that may be needed. Future funding availability will play a major role in determining when construction begins and the priority and schedule under which the projects within each phase can be implemented.

The following general considerations will be taken into account when determining the scope of future RODs.

- ❖ CDOT will consider equity issues and the need to balance the construction of improvements throughout the corridor.
- ❖ If local agency funding or other reasonably available funding (such as private funds or other unexpected or nontraditional funding sources) becomes available, projects may be identified for inclusion in future RODs.

- ❖ Circumstances in the corridor may change such that agreements with the City of Pueblo (City) (see **Appendix F**) developed during the FEIS process would impact the decision on which projects to advance.
- ❖ If state and/or federal funds become available, CDOT will select projects to include in future RODs based on the following priorities: Safety, Mobility, and Community Values.

In reevaluating the scope of future project phases, CDOT will conduct a public information campaign and will consult with the City and PACOG. Additionally, as each individual project goes through the final design process, input would be sought from those local agencies affected, as is typical in CDOT project planning. Stakeholder input will also be sought in accordance with agreements that were developed during the NEPA process and documented in this FEIS. Once the projects have been determined for the next phase, the ROD will identify impacts and appropriate mitigation measures that are associated with those actions.

5.1 PROJECT FUNDING

The Pueblo Regional Transportation Plan (PACOG, 2008), which serves as the 20-year regional transportation plan for the Pueblo area, consists of two primary sections: the Preferred Plan and the Fiscally Constrained Plan (PACOG, 2008). The Preferred Plan identifies long-range improvements needed for the transportation network in the Pueblo region, without regard to available funding. The Preferred Plan programs approximately \$846 million (2008 dollars) for needed improvements to the I-25 through Pueblo corridor, which would fully fund the entire New Pueblo Freeway Project (estimated at \$760.5 million in 2010 dollars) based on preliminary design estimates. The Fiscally Constrained Plan for the Pueblo area must include only those projects that can be funded with available funds from state and federal sources and other reasonable available funding, such as private funds or other unexpected or nontraditional funding sources. The Fiscally Constrained Plan identifies projects that have been allocated funding and will be implemented by 2035. The PACOG is preparing an amendment to the Fiscally Constrained Plan to be completed prior to the Phase 1 ROD that will identify between \$300 and \$315 million for New Pueblo Freeway project improvements. CDOT intends to use this funding for

Phase 1 of the Preferred Alternative or for the improvements identified for the No Action Alternative, described in **Chapter 2 – Alternatives, Section 2.6.1**.

5.2 PROJECT PHASING

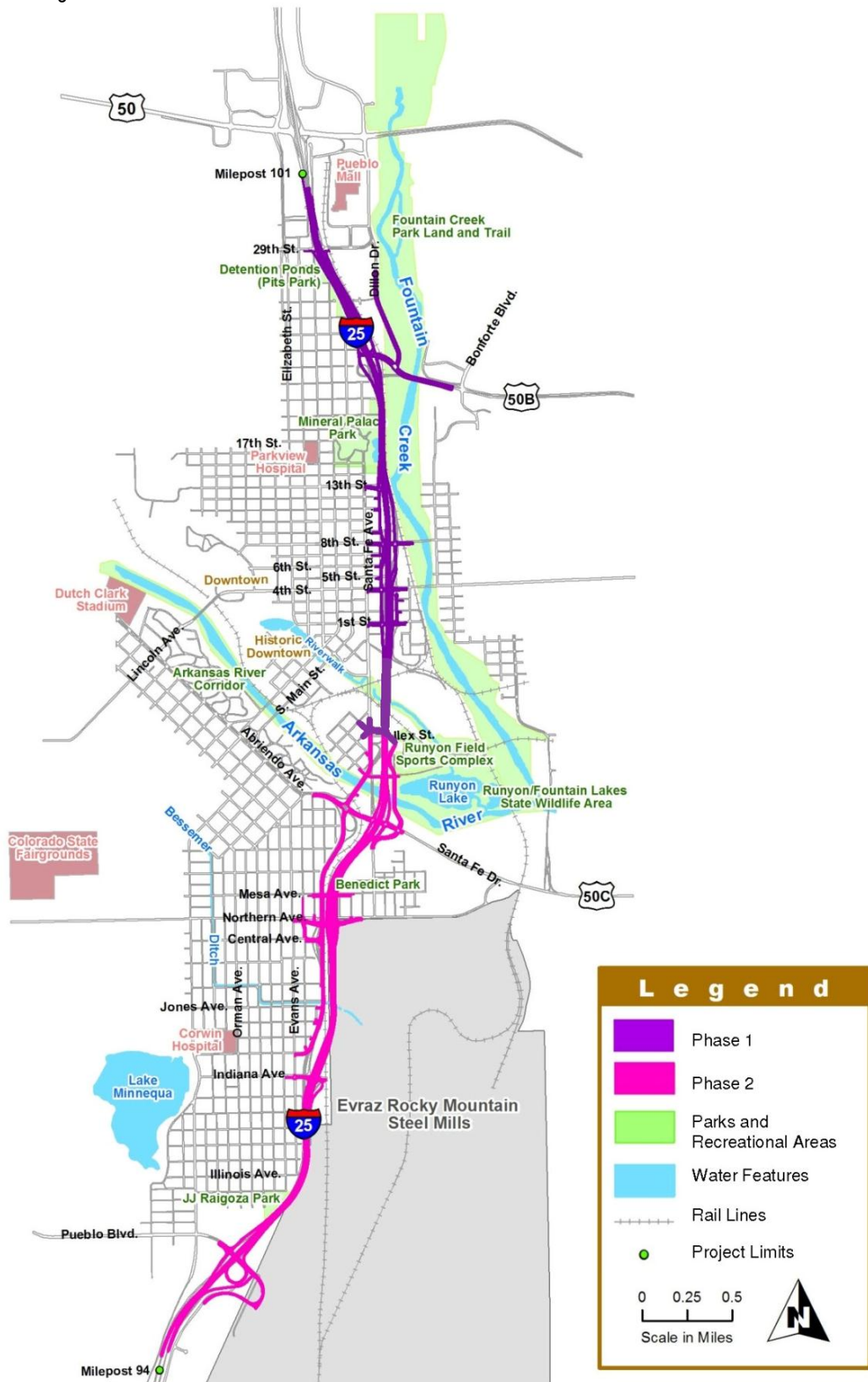
The Preferred Alternative is approximately 7 miles in length and widens I-25 to six lanes (three in each direction) from just north of 29th Street to Indiana Avenue and maintains four lanes (two in each direction) from Indiana Avenue to Pueblo Boulevard. The highway would be straightened through downtown Pueblo and relocated to the east of the current highway alignment between Abriendo Avenue and Indiana Avenue. Additional details of the Preferred Alternative can be found in **Chapter 2 – Alternatives, Section 2.6.3**. The Preferred Alternative was developed based on the project's stated Purpose and Need (see **Chapter 1 – Purpose and Need**), engineering analyses, an evaluation of environmental resources, and a public involvement effort that included coordination with the public, agencies, and local officials, as described in **Chapter 2 - Alternatives**.

The scale of the Preferred Alternative and the funding limitations dictate that the project be constructed in phases. The limits of the two designated phases are shown in **Exhibit 5-1**.

The elements included in each phase and the associated environmental impacts and mitigation measures are described in the remainder of this chapter.

The decision of which elements to include in Phase 1 of the project was made based on funding constraints, the project Purpose and Need, and CDOT regional priorities. The elements of Phase 1, described in Section 5.2.1, were included in the first construction phase because they address many of the existing geometric deficiencies and would provide additional roadway capacity along the sections of I-25 with the most congestion. Phase 2 improvements consist of elements in the Central and South Areas of the corridor, where I-25 is proposed to be realigned to the east. Constructing these improvements simultaneously is necessary to accommodate the shift in highway alignment for most of the projects described in Section 5.2.2.

EXHIBIT 5-1
Preferred Alternative Project Phasing



5.2.1 Phase 1 – North Area

Description of Improvements

Phase 1 consists of five projects for highway widening and interchange reconstruction from milepost (mp) 101 south to the Ilex bridges, including a complete reconstruction of I-25 in the downtown area, as described in **Chapter 2 – Alternatives, Section 2.6.3**. The expected cost for Phase 1 is \$300 to \$315 million (2010 dollars¹).

As described in Section 5.1, the PACOG is preparing an amendment to the Fiscally Constrained Plan to be completed prior to the Phase 1 ROD which will allocate the entire estimated cost for Phase 1.

As required by 23 CFR 771.111(f), Phase 1 improvements are considered a reasonable expenditure of funds and would incrementally contribute to addressing the Purpose and Need of the project, even if no additional transportation improvements are made in the area. This is described for each construction project in Phase 1.

The termini for Phase 1 have been selected as mp 101 on the north and the Ilex bridges on the south, which corresponds to the North Area evaluated in **Chapter 3 – Affected Environment and Environmental Consequences**. Mp 101 was selected as the northern terminus of Phase 1 because it is where the New Pueblo Freeway project ties into previously completed capacity and interchange improvements on I-25. The southern terminus was selected as the Ilex bridges for two reasons:

- 1) Traffic patterns indicate that current and future traffic volumes are lower south of Ilex Street on I-25. Current traffic in the North Area (Phase 1) is level of service (LOS) C on I-25 (see **Chapter 1 – Purpose and Need, Exhibit 1-5**). By 2035, the LOS is predicted to degrade to LOS F in many locations of the North Area (Phase 1) under the No Build scenario. South of the Ilex bridges in the Central Area (Phase 2) and South Area (Phase 2), current highway capacity is adequate, resulting in LOS of B from Ilex Street to Central Avenue and LOS A from Central Avenue to Pueblo Boulevard. By 2035, future

traffic is also predicted to degrade south of Ilex Street, however, it will not degrade lower than LOS D at any location south of Central Avenue in the No Build scenario. The PACOG forecasts that most of Pueblo County's growth over the 30-year planning horizon will occur north and west of downtown Pueblo, making improvements to the north area (Phase 1) of I-25 most immediately beneficial.

- 2) The Preferred Alternative would shift the alignment of I-25 to the east through the Central Area of the project (from Ilex Street to approximately Nevada Avenue). To construct these improvements in their ultimate location off of the current I-25 mainline, they must be built in the same phase to avoid the need for temporary connections that would have to be reconstructed as future phases are completed. This could be costly and would result in excessive irretrievable losses of labor, funding, energy, and materials. Thus, it is not logical to extend capacity improvements on I-25 or complete interchange reconstructions south of the Ilex bridges as part of Phase 1.

The improvements proposed in Phase 1 would have independent utility in that each element would provide transportation benefits, would be a reasonable expenditure even if no additional improvements are made in the area, and would have logical termini. In addition, Phase 1 would not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements.

Mitigation elements such as trail connections, noise walls, Mineral Palace Park, and water quality ponds in Phase 1 will be built along with the adjacent improvements as each project is constructed (described in **Exhibit 5-3**).

Section 3.3 Parks and Recreation, Section 3.5 Noise and Section 3.15 Water Quality provide more details on these proposed mitigations.

The five projects proposed for Phase 1 and included in the Fiscally Constrained Plan (PACOG, 2008) are as follows:

- ❖ **Ilex Viaduct Replacement on I-25.** The structurally deficient Ilex Viaduct will be replaced with two separate bridges. The project will maintain full access of Exit 98A to Ilex Street until future phases of construction. Preserving this existing interchange requires removal of the existing Ilex Street. To retain access to the northbound ramps, a portion of the ultimate Stanton

¹ Because the year of expenditure is unknown for future phases of construction, dollar amounts for Phase 1 are reported in 2010 dollars. These costs may be understated or overstated depending on economic factors such as material costs and inflation.

Avenue extension is included to connect these ramps to Santa Fe Avenue. A minimal amount of I-25 reconstruction will be required to tie the ultimate bridge location (under the shifted Modified I-25 Alternative alignment) back into the current I-25 alignment until subsequent phases of the project are constructed. The Ilex Viaduct Replacement addresses the *mobility* elements of the Purpose and Need by replacing aging bridges with low sufficiency ratings. The Ilex bridges have among the lowest sufficiency ratings in the 7-mile project area on I-25, and one of the existing bridges is considered structurally deficient.

- ❖ **Downtown Improvements on I-25 from 13th Street to 1st Street.** This construction project is the most complex area of the entire I-25 corridor and will be the most expensive of the Phase 1 projects to implement. The project consists of a complete widening and reconstruction of I-25, construction of a split-diamond interchange between 13th Street and 1st Street with additional exit ramps near 6th Street, and construction of one-way frontage roads between the ramps. Improvements to the southbound on-ramp from 1st Street and the northbound off-ramp to 1st Street are also included in this project, along with the viaduct replacement on I-25 between the Ilex viaduct and the 1st Street bridge. This construction project addresses the *safety* element of the Purpose and Need by correcting: tight curves, steep grades, inadequate clear zones, inadequate stopping sight distances, poor ramp design and inadequate ramp lengths, ramps that connect to local streets, and insufficient shoulder widths. The geometric deficiencies on this section of I-25 result in fair to poor accident ratings.

This construction project also addresses the *mobility* element of the Purpose and Need by increasing capacity where the highest future congestion in the project area is forecast. It also supports east-west connectivity through downtown through the construction of the downtown split-diamond interchange with one-way frontage roads.

- ❖ **U.S. Highway (US) 50B Interchange with I-25.** Planned improvements consist of reconstruction of the US 50 Bypass Interchange and the US 50B bridge over Fountain Creek. This project also includes widening the portion of I-25 from 13th Street up to the US 50B Interchange. Due to the impacts of widening this portion, the project includes mitigation improvements to Mineral Palace Park. This mitigation could be designed and constructed prior to work on I-25 between

13th Street and US 50B. This construction project addresses the *safety* element of the Purpose and Need by correcting: tight curves, steep grades, inadequate clear zones, inadequate stopping sight distances, poor lane balance and ramp sequencing, and deficient ramp design at US50B. These deficiencies on this section of I-25 result in fair to poor accident ratings.

This construction project also addresses the *mobility* element of the Purpose and Need by increasing capacity where high future congestion is forecast. Additionally, construction of a pedestrian overpass near Mineral Palace Park will increase mobility for non-motorized users.



Ilex Street Viaduct

- ❖ **I-25 North of the US50B interchange through 29th Street.** This project includes widening I-25 from four to six lanes, constructing frontage roads, and reconstructing interchanges from north of the US 50B interchange to milepost 101 north of 29th Street. This construction project addresses the *safety* element of the Purpose and Need by correcting inadequate spacing between the 29th Street and US 50B ramps. This construction project also addresses the *mobility* element of the Purpose and Need increasing capacity where high future congestion is forecast.
- ❖ **Dillon Drive Extension.** The four-lane extension of Dillon Drive from 26th Street south to US 50B will provide north/south connectivity between US 50B and 29th Street and offers an off-highway alternative for local traffic, which directly supports the *mobility* elements of the project Purpose and Need. Additionally, it will reduce traffic demand on I-25 parallel to Dillon Drive and construct sidewalks along Dillon Drive, which increases mobility for non-motorized users.

The Ilex Viaduct Replacement project is anticipated to be the first project for construction to begin in the summer of 2014. A public open house was held for the surrounding neighborhood of this project where concepts for the aesthetic design of the bridge were presented. See **Chapter 6 – Comments and Coordination** for more information on the Ilex open house. **Exhibit 5-2** shows an artist rendering of the design aesthetics for the Ilex Bridge Reconstruction.

Environmental Impacts and Mitigation

The environmental impacts and associated mitigation measures associated with implementation of the Preferred Alternative in its entirety are evaluated in **Chapter 3 – Affected Environment and Environmental Consequences**. However, for a phased implementation approach, it is necessary to evaluate the environmental impacts by phase to evaluate and disclose any incremental impacts that could result from the construction of the project in phases.

EXHIBIT 5-2

Artist Rendering of Ilex Viaduct Replacement Project



Exhibit 5-3 summarizes the environmental impacts and associated mitigation commitments associated with implementation of Phase 1. Mitigation measures identified in **Exhibit 5-3** would be completed in conjunction with construction of Phase 1 improvements. Indirect impacts for all phases would be the same as those listed for each resource in **Chapter 3 – Affected Environment and Environmental Consequences** and are not discussed further in this chapter.

Irretrievable and irreversible commitments of labor, funding, energy, and materials would occur during the full build out of the New Pueblo Freeway Project. Some elements of Phase 1 are in an interim location and would need to be reconstructed as future phases are completed, which would result in irretrievable losses of labor, funding, energy, and materials. However, the decision to proceed in phases was made due to existing funding limitations. The elements of Phase 1 are anticipated to provide a substantial benefit to corridor users and would therefore offset the irreversible impacts.

The incremental environmental impacts that would occur as a result of project phasing are summarized below.

- ❖ The construction period of the project would occur over a longer period of time, resulting in:
 - More detours and traffic delays that would inconvenience residents, adjacent businesses, and community facilities.

An economic benefit to the area due to multiple construction mobilizations and the need for additional construction workers.

- Extended visual impacts to adjacent communities, including exposed soils, staging areas, and construction lighting.
- A greater potential for the spread of invasive species and the need to re-disturb land when portions of the project are reconstructed.

EXHIBIT 5-3

Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1

Impacts	Mitigation
TRANSPORTATION	
<ul style="list-style-type: none"> ❖ Phase 1 would upgrade interchanges to current design standards, improve interchange spacing, and provide connectivity to appropriate local streets. ❖ Phase 1 would reconstruct interchanges at US 50B and between 1st Street and 13th Street to connect I-25 to more appropriate City streets. Dillon Drive would be extended to increase off-highway local mobility for users. ❖ Phase 1 would restore off-highway connections that were removed during original I-25 construction. It would also provide alternative north-south routes for local users on Dillon Drive. ❖ Phase 1 would replace 8 bridges that have low sufficiency ratings. ❖ The improvements in Phase 1 would correct operational deficiencies and provide additional capacity on I-25 to improve congestion between 29th Street and Ilex Street to accommodate future travel demands. Construction of the project in phases would not result in any bottlenecks or unacceptable traffic conditions. ❖ Phase 1 would replace the temporary connections required in Phase 1 construction. ❖ Construction of Phase 1 would cause temporary impacts to the railroads during bridge construction. ❖ Phase 1 would require modifications to Transit Route 6 because it reconfigures the downtown interchange system. ❖ Pedestrian and bicycle mobility would be improved through provisions of multi-modal elements in Phase 1 such as trails and sidewalks. Construction of pedestrian trails along I-25 to the north and south and across I-25 near Mineral Palace Park would improve pedestrian and bicycle mobility. ❖ Phase 1 improvements would cause temporary impacts to traffic during construction, such as changes in access, delay caused by lane closures, out-of-direction travel incurred due to detours, and other similar unavoidable impacts caused by construction-related activities. As a result of phasing, the construction period of the project would be longer, resulting in more detours and traffic delays that would inconvenience residents and businesses during construction. 	<ul style="list-style-type: none"> ❖ To minimize the impact of construction on bus routing and service, CDOT will coordinate with the Pueblo Transit System prior to and throughout construction of Phase 1. ❖ CDOT will follow appropriate permitting, including coordination with the railroads for impacts to the rail lines during bridge construction for Phase 1. ❖ CDOT will conduct public information efforts, including development of a Public Information Plan (described in more detail in Section 3.1 Transportation) to inform the public and affected businesses in advance of lane closures, detours, and interchange reconstruction activities. ❖ CDOT will maintain safe business access and provide at least one access point to downtown Pueblo during construction of Phase 1. ❖ CDOT will develop a Traffic Control Plan during final design that will detail strategies (described in more detail in Section 3.1 Transportation) to minimize traffic disruption from construction activities. Whenever possible, the existing number of lanes will be maintained throughout construction. Speed limits will be reduced in work zones. Access to properties will be maintained at all times. ❖ A mitigation monitoring and implementation plan will be developed during final design. Commitments to mitigate for both construction and operational effects of a preferred alternative will be modified or adapted, if needed, based on final project design.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
HISTORIC PROPERTIES	
<ul style="list-style-type: none"> ❖ Phase 1 would have adverse effects to 24 historic resources, including the North Side Historic District and Second Ward Historic District. ❖ Phase 1 would have the potential to impact 1 Need Data historic archaeological site. 	<ul style="list-style-type: none"> ❖ A Programmatic Agreement has been developed by FHWA, CDOT, and the SHPO to outline mitigation for adverse effects to historic properties. The Programmatic Agreement identifies specific categories of mitigation for further consultation and investigation, including resource relocation, interpretive mitigation, and archival documentation. Mitigation measures are described in more detail in Section 3.2 Historic Properties and Appendix H. ❖ A Programmatic Agreement has been developed by FHWA, CDOT, and the SHPO to outline mitigation for adverse effects to historic properties. The Programmatic Agreement includes stipulations for historic archaeological data recovery excavations and testing, as described in Section 3.2 Historic Properties and Appendix H.
PARKS AND RECREATION	
<ul style="list-style-type: none"> ❖ Under Phase 1, the detention ponds between 29th Street and 24th Street and Mineral Palace Park would potentially be impacted by noise without implementation of mitigation measures. ❖ Widening of I-25 adjacent to Mineral Palace Park in Phase 1 would result in a loss of 50 feet along the entire eastern edge of the park, equal to 1.69 acres (3.7 percent of the park). Widening would also remove the northeast park road to a parking lot, 40 parking spaces, vegetation including 20 mature trees, 15 to 20 percent of Lake Clara, 40 feet of the Works Progress Administration wall around Lake Clara, and 13 percent of the maintenance yard. An informal path within the park would also be impacted. ❖ The improvements in Phase 1, including an extension of Dillon Drive to US 50B, relocation and widening of US 50B to the north, and improved 8th Street connection to the east of I-25, would require the acquisition of 6.26 acres of property from Fountain Creek Park Land property. Land acquisition from the Fountain Creek Park Land would constitute a conversion of Section 6(f)(3) assisted property to a transportation use.¹ ❖ Temporary detours of the Fountain Creek Trail and Thomas Phelps Creek Trail would be required to protect the public when construction is occurring above the trail. 	<ul style="list-style-type: none"> ❖ To alleviate forecasted noise from I-25, mitigation structures (where appropriate) will be constructed. Mitigation measures are described in more detail in Section 3.5 Noise. ❖ City staff and citizens participated in an extensive public involvement process to determine adequate mitigation for project impacts to Mineral Palace Park. This process resulted in the development of a restoration plan for the park (described in more detail in Section 3.3 Parks and Recreation). The restoration will adhere to a theme of celebrating the past and connecting to neighborhoods. ❖ Water treatment ponds will be constructed to treat stormwater runoff from I-25, reducing untreated stormwater runoff into Fountain Creek and in the riparian and wetland habitat areas adjacent to the creek. Trails and picnic areas will also be incorporated into the design. ❖ CDOT will construct a pedestrian bridge to provide access to the Fountain Creek Park Land from Mineral Palace Park and its surrounding neighborhood. ❖ CDOT will ensure there is an equal value exchange for all Section 6(f)(3) property acquired in accordance with the requirements of the Land and Water Conservation Fund (LWCF) Act of 1965. ❖ CDOT has coordinated with Colorado Parks and Wildlife (CPW) and the U.S. Department of the Interior (DOI) with regard to the conversion of Section 6(f)(3) assisted property (see correspondence dated June 25, 2012 and July 10, 2012 in Appendix B). The official conversion request and DOI concurrence will occur prior to project completion, and the value of the land will be assessed prior to DOI final approval. ❖ CDOT will provide advance notice to the public of temporary trail detours and/or closures of the Fountain Creek Trail or Thomas Phelps Creek Trail during construction. Access will be maintained throughout construction to minimize impacts to users.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
RIGHT-OF-WAY AND RELOCATIONS	
<ul style="list-style-type: none"> ❖ Construction of Phase 1 would require a total of 102 acquisitions (74 total and 28 partial). ❖ Residential impacts from Phase 1 include 16 total acquisitions and no partial acquisitions. ❖ Commercial impacts from Phase 1 include 28 total acquisitions and 12 partial acquisitions. ❖ Vacant undeveloped impacts from Phase 1 include 21 total acquisitions and 5 partial acquisitions. ❖ A total of 25 businesses would be displaced by the construction of Phase 1. ❖ Public impacts from Phase 1 include 9 total acquisitions and 11 partial acquisitions. 	<ul style="list-style-type: none"> ❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. All impacted owners will be provided notification of CDOT's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests. A right-of-way (ROW) Agent will be assigned to each property owner to assist with this process. Mitigation measures are described in more detail in Section 3.4 Right-of-Way and Relocations. ❖ Phase 1 impacts to public properties are considered mutually beneficial, and the Memorandum of Understanding between CDOT and the City (see Appendix F) specifies future land exchange, ownership, and maintenance responsibilities. A future Intergovernmental Agreement will address ownership of excess ROW. Mitigation measures are described in more detail in Section 3.4 Right-of-Way and Relocations.
NOISE	
<ul style="list-style-type: none"> ❖ Seven receptors would meet or exceed CDOT's noise abatement criteria with the implementation of Phase 1 improvements: Goat Hill – Bradford Street; Goat Hill – Kelly Avenue; Mineral Palace Park; Fountain Creek Park Land; the open field at the southeast corner of I-25 and US 50B; residences at 20th Street and Santa Fe Avenue; and 27th Street and Court Avenue. ❖ Construction of Phase 1 would create temporary noise impacts. 	<ul style="list-style-type: none"> ❖ For Phase 1, approximately 7,660 feet of noise walls would be constructed to mitigate noise impacts. Noise walls were determined to be the most appropriate mitigation strategy for this project, except for areas in Mineral Palace Park where berms would better fit the context of the park. Mitigation measures are described in more detail in Section 3.5 Noise. Additional noise analysis will be performed during final project design to refine the final mitigation measures and dimensions. ❖ Additional noise analysis will be performed during final design to refine the final mitigation measures and dimensions. As part of the CDOT Noise Analysis and Abatement Guidelines (CDOT, 2011a), CDOT shall solicit current residential occupants and property owners' opinions on whether to build or not build the abatement measures recommended for the Modified I-25 Alternative (Preferred Alternative). A vote of equal standing will be provided one resident and one owner per benefited dwelling unit prior to the signing of the ROD. ❖ When construction occurs in residential areas or other noise-sensitive areas, such as parks or hospitals, construction noise will be mitigated by restricting construction to daylight hours when possible and requiring contractors to use well-maintained equipment, including muffler systems.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
SOCIAL RESOURCES, ECONOMIC CONDITIONS, AND ENVIRONMENTAL JUSTICE	
<ul style="list-style-type: none"> ❖ Community cohesion in the Northside, Eastside, and Downtown neighborhoods would be positively impacted by Phase 1 improvements to local roadway and trail systems. ❖ A total of 25 businesses would be displaced by the construction of Phase 1, and business relocations would impact employment. However, the implementation of Phase 1 would generate direct and indirect employment opportunities throughout construction. ❖ Economic impacts are largely tied to ROW acquisitions through loss of tax revenue and displaced businesses and residences. As a result of phasing, the construction period of the project would be lengthened, resulting in more disruptions to businesses adjacent to the corridor and detours and traffic delays that would inconvenience residents, businesses, and community facilities during construction over the course of the project. At the same time, there would be an economic benefit to the area as a result of multiple construction mobilizations and the need for additional construction workers. ❖ Impacts from Phase 1 would be predominantly borne by minority and low-income populations. When offsetting benefits from the project and proposed mitigation are also considered, these impacts would not be considered disproportionately high and adverse. Although residential and commercial relocations would be from within minority and low-income neighborhoods, both renters and owners will be compensated for acquisition and provided relocation benefits in accordance with the Uniform Act. Relocations would not be substantial enough to alter the composition of the neighborhood or otherwise negatively affect community cohesion. Although some jobs would be lost, many would be relocated and the project itself would generate new employment opportunities. Noise walls would be constructed to mitigate noise impacts. Visual impacts would be lessened through design consistent with New Pueblo Freeway Aesthetic Guidelines (see Appendix C). <p>Construction-related nuisances would be greatest for the minority and low-income residents adjacent to Phase 1 construction areas, but impacts would be temporary and would be lessened through a variety of mitigations, including a Traffic Control Plan, Public Information Plan, restrictions on night-time construction, equipment requirements, signage, and well-marked detours. Minority and low-income residents serve to benefit most from the improvements that would result from Phase 1, including enhanced safety and local mobility, new pedestrian facilities and connections, the restoration of Mineral Palace Park, restored neighborhood connections, and improved community cohesion.</p>	<ul style="list-style-type: none"> ❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. Mitigation measures are described in more detail in Section 3.4 Right-of-Way and Relocations. ❖ Relocation areas for businesses serving the City and the region will be identified. Efforts will be made to relocate businesses that are displaced within the City limits in order to maintain property and sales tax revenues to the City. Mitigation measures are described in more detail in Section 3.6 Social Resources, Economic Conditions, and Environmental Justice. ❖ CDOT will make a Public Information Plan available throughout construction. This plan and any information on construction activities and detours will be provided in both English and Spanish. Mitigation measures are described in more detail in Section 3.1 Transportation. ❖ Signage and detours will be set in place to direct traffic to businesses, residences, and community facilities adjacent to construction. ❖ CDOT will provide permanent directional signage ahead of the 13th Street exit, 6th Street slip ramp, and Santa Fe Drive interchange to indicate to motorists how best to access the Santa Fe Avenue business district. ❖ CDOT will provide advance notice to emergency service providers, Colorado State Patrol, schools, the community, and residents regarding road delays, access, and special construction activities. ❖ Aesthetic enhancements of the highway improvements will be implemented as agreed upon in the Memorandum of Understanding between the City and CDOT (see Appendix F).

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
WETLANDS	
<ul style="list-style-type: none"> ❖ Phase 1 construction would result in the direct loss of 0.13 acre of wetlands. 	<ul style="list-style-type: none"> ❖ Wetland boundaries will be reevaluated to determine the need for additional delineations once construction funding has been identified. ❖ CDOT will obtain the appropriate Section 404 permit from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act prior to construction of Phase 1. CDOT and FHWA will work with the USACE to identify a suitable site for wetland mitigation that would replace the functional values impacted by the project. CDOT will coordinate potential wetland mitigation locations with CPW and will provide CPW with the Section 404 permit for review. ❖ CDOT will replace impacted wetlands on a 1:1 basis regardless of jurisdictional determination. Additional mitigation measures identified by the USACE may also include placing tree cuttings at various locations near the project area. Mitigation measures are described in more detail in Section 3.7 Wetlands. Following final project design, CDOT will apply for a Senate Bill (SB) 40 Wildlife Certification if the project does not fall within CDOT's Programmatic Agreement with CPW, including detailed plans and specifications.
LAND USE	
<ul style="list-style-type: none"> ❖ Phase 1 improvements are consistent with current and future land-use plans, including urban residential, urban mixed use, and light industrial employment centers. 	<ul style="list-style-type: none"> ❖ None needed.
VISUAL RESOURCES	
<ul style="list-style-type: none"> ❖ Phase 1 improvements would alter the Fountain Creek and Downtown Neighborhood viewsheds by introducing new roadway modifications. The increased mass of the highway and presence of new elements associated with the roadway (such as noise barriers and water quality ponds) would increase the highway's visual presence on the existing neighborhoods along I-25. ❖ As a result of the longer construction period, visual impacts such as exposed soils, staging areas, and construction lighting would occur over a longer time period, resulting in additional impacts to adjacent communities. 	<ul style="list-style-type: none"> ❖ Mitigation for impacts to visual resources will be addressed during final design of all Phase 1 elements. Mitigation measures, such as sound walls and bridges, will be designed for compatibility with the theme in the area consistent with the <i>New Pueblo Freeway Aesthetic Guidelines</i> (see Appendix C).
AIR QUALITY	
<ul style="list-style-type: none"> ❖ No National Ambient Air Quality Standards (NAAQS) violations for carbon monoxide are expected as a result of Phase 1. ❖ Exceedance of NAAQS for particulate matter less than 10 microns (PM₁₀) is not expected for Phase 1. ❖ Mobile Source Air Toxics (MSAT) emissions are proportionate to the increase in vehicle miles traveled (VMT) in Phase 1 compared to the No Action Alternative. ❖ As a result of the longer construction period, impacts from excavation, grading, and fill work that could increase local fugitive dust and exhaust emissions, would occur over a longer time period. However, with the implementation of best management practices (BMPs) the effect of this impact will be negligible. 	<ul style="list-style-type: none"> ❖ Because no adverse air quality impacts are anticipated to occur as a result of the proposed Phase 1 improvements, mitigation is not required from an air quality standpoint. ❖ BMPs (described in more detail in Section 3.10 Air Quality) will be implemented to control dust during construction of Phase 1.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
HAZARDOUS MATERIALS	
<ul style="list-style-type: none"> ❖ Construction of Phase 1 would impact four sites of potential environmental concern: the industrial facility southwest of Dillon Drive, Cliff Brice Petroleum Warehouse Bulk Storage Plant site, Stoehr Cleaners, and the Silo Building 4392. ❖ Construction of Phase 1 would impact four sites with recognized environmental conditions (REC): Rockwool Industries, Rampart Supply, the Pueblo MOP Yard (former Missouri Pacific Yard), and the River Street Property. ❖ All bridges replaced as part of Phase 1 may be coated with lead-based paint. ❖ As with any construction project that involves excavation, there is the potential to unearth buried construction debris during construction of Phase 1. Such unforeseen debris sometimes could include asbestos-containing material (ACM) that requires special handling and disposal. Special waste handling and excavation requirements would be necessary during construction. 	<ul style="list-style-type: none"> ❖ A site-specific Phase I Environmental Site Assessment conducted prior to construction or acquisition of any site. The nature and extent of any soil or groundwater contamination will be assessed to determine whether remediation will be required or modifications to project design can be made. ❖ A Phase II Initial Site Assessment (ISA) may be performed on RECs or areas of potential environmental concern. Contaminated material will be dealt with in accordance with environmental regulations. A Health and Safety Plan will be developed prior to construction. ❖ A Materials Management Plan, which includes handling of ACM, and a Health and Safety Plan will be developed for areas with known soil and groundwater contamination. The level of remediation will be determined in accordance with applicable federal and state laws and based on the final project alignment, ROW requirements, and degree of subsurface disturbance during construction. ❖ Engineering controls will be considered to minimize potential disposal costs and to avoid contamination. ❖ If dewatering is necessary, groundwater will be managed according to applicable regulations and permitted by the Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division. ❖ Groundwater monitoring wells within the construction area will be abandoned and plugged in compliance with the Colorado Department of Natural Resources Division of Water Resources State Engineer Water Well Construction Rules. ❖ Prior to demolition of structures, sites will be surveyed for any regulated materials. CDOT will meet all state and Federal regulations pertaining to demolition of buildings and other structures. Regulated materials must be removed from structures prior to demolition and appropriately recycled or disposed. ❖ CDOT will evaluate and recommend remediation for any potential ACM, including landfill material, construction debris, utilities, or other materials. Appropriate CDOT specifications will be followed regarding the potential for asbestos-containing construction debris in soil.
FISH AND WILDLIFE HABITAT	
<ul style="list-style-type: none"> ❖ Construction of Phase 1 would result in the direct loss of 5.04 acres of wildlife habitat. ❖ Construction of Phase 1 could result in a loss of low-quality nesting habitat for migratory birds. ❖ Construction of Phase 1 would result in noise from construction activities that could affect wildlife species, and could temporarily displace priority bird species. Construction activities could also affect wildlife by removing vegetation and wildlife habitats. 	<ul style="list-style-type: none"> ❖ Habitat replacement, restoration, or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas along Fountain Creek (described in more detail in Section 3.12 Fish and Wildlife Habitat). Wildlife surveys will be done prior to final design and construction to identify additional opportunities to avoid and minimize impacts to fish and wildlife habitats, including surveying for the presence of bird nests, prairie dogs, and burrowing owls. Nests will be removed from structures prior to April 1 before the nesting season begins.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
	<p>Following final design, CDOT will apply for an SB 40 Wildlife Certification if the project does not fall within CDOT's Programmatic Agreement with CPW, including detailed plans and specifications.</p> <p>Field surveys will be conducted prior to construction activities to determine the presence or absence of birds protected under the Migratory Bird Treaty Act. Prior to the removal of trees, shrubs, and grasses, a bird nesting survey will be conducted. If an active nest is found, construction activities with a potential to impact the success of the nest will not be allowed until the young have fledged or until the nest becomes inactive. Trees that are removed will be mitigated at a 1:1 ratio or as specified by state and federal wildlife agencies to ensure raptor perch trees are replaced for future use. Mitigation measures are described in more detail in Section 3.12 Fish and Wildlife Habitat.</p> <ul style="list-style-type: none"> ❖ BMPs (described in more detail in Section 3.12 Fish and Wildlife Habitat) such as limiting sedimentation, revegetation, and clearly marking construction boundaries to prevent equipment or other intrusion into habitat located outside the construction zone will be adopted to minimize construction impacts on wildlife and habitat resources within the study area. A concrete washout area will be provided at suitable locations within the CDOT ROW during construction, as described in more detail in Section 3.12 Fish and Wildlife Habitat. ❖ Updated wildlife surveys will be completed prior to construction, including surveys of prairie dogs and burrowing owls. CDOT will coordinate with CPW on the results of the wildlife surveys prior to construction and will seek input on impact avoidance and mitigation plans. ❖ To avoid injury or mortality to bat species, CDOT will survey for bats prior to repairing or replacing bridges, and if any are found, efforts will be made to remove them humanely. ❖ All bridge work on the project will be performed in accordance with appropriate CDOT Standard Specifications for Roadway and Bridge Construction and will comply with applicable laws and MOAs.

SENSITIVE SPECIES

- | | |
|---|---|
| <ul style="list-style-type: none"> ❖ Construction of Phase 1 would impact 5.04 acres of plains leopard frog habitat. ❖ Construction of Phase 1 would impact 0.13 acre of Arkansas darter habitat. | <ul style="list-style-type: none"> ❖ The mitigation measures to compensate for impacts on wetlands, flowing water, and riparian habitats used by the Arkansas darter and plains leopard frog are described in Sections 3.7 Wetlands, 3.12 Fish and Wildlife, 3.15 Water Quality, and 3.18 Noxious Weeds. These mitigations might benefit terrestrial and aquatic plant and wildlife species by improving and protecting potential habitat along Fountain Creek and the Fountain Creek floodplain. Implementing these mitigation measures might enlarge the size of contiguous blocks of wetland and riparian habitats, improve habitat connectivity, and enhance functions of the existing habitat. Such results would provide functional benefits for sensitive species. |
|---|---|

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
	<ul style="list-style-type: none"> ❖ Habitat restoration or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas along Fountain Creek (described in more detail in Section 3.13 Sensitive Species). ❖ A SB 40 permit will be obtained by CDOT prior to construction. ❖ Wildlife surveys will be completed prior to construction. CDOT will coordinate with CPW on the results of the wildlife surveys prior to construction and will seek input on impact avoidance and mitigation plans. Pre-construction surveys will be conducted for all T&E species, including prairie dogs and burrowing owls.

FLOODPLAINS

- ❖ The Phase 1 improvements would result in 3.35 acres near the US 50B bridge being inundated during a 100-year flood event, in an area not currently within the 100-year floodplain boundaries. The Dillon Drive extension would result in two longitudinal encroachments of the floodplain, increases in the base flood elevation (BFE) and floodplain width upstream of the new Dillon Drive embankment, and increased channel velocity below the embankment. The reconstructed US 50B bridge would have a greater conveyance capacity, resulting in a decrease in BFE near the bridge. Scouring and erosion may result at the US 50B bridge.
- ❖ Mitigation measures to demonstrate no rise in the BFE may involve channel grading to increase water conveyance, construction of an overflow channel, or reduction in the channel roughness. This work may require CDOT to obtain a Section 404 permit from the USACE under Section 404 of the Clean Water Act prior to construction.
- ❖ The small inundated area within the Fountain Creek Floodplain will be managed to reduce impacts. Approximately 0.2 acre of private property may be acquired by CDOT, and the estimated 3.2 acres of City property will be managed in perpetuity as part of the Fountain Creek Park Land. In its Memorandum of Understanding with CDOT, the City has agreed that no structures will be permitted in this area (see **Appendix F**). Based on the results of the floodplain analyses using revised modeling and the final I-25 design configuration, CDOT will likely need to apply for Flood Insurance Rate Map revisions through the Federal Emergency Management Agency, as described in more detail in **Section 3.14 Floodplains**. A Letter of Map Revision application is required for any substantial encroachment upon the floodplain.
- ❖ Streambed and bank stabilization measures (described in more detail in **Section 3.14 Floodplains**) will be included in the final project plans for the area surrounding the US 50B bridge.
- ❖ Floodplain mitigation will comply with Executive Order (EO) 11988, "Floodplain Management," during design of any selected alternative. State of Colorado drainage design standards will be applied to achieve results that will not increase or significantly change the existing flood elevations and/or limits.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
WATER QUALITY	
<ul style="list-style-type: none"> ❖ Phase 1 improvements and additional traffic on I-25 in the future will generate more pollutants. BMPs in compliance with the Colorado Discharge Permit System (CDPS) Municipal Separate Stormwater Sewer System (MS4) permit requirements are designed to decrease the amount of pollutants actually entering the waters and are expected to lower the amounts of pollutants for Phase 1 compared to the No Action Alternative. ❖ Phase 1 construction would remove vegetation and create bare surfaces that may cause erosion and sedimentation issues. All highway runoff would be collected and treated to the level required by CDOT's New Development and Redevelopment Program. BMPs can be constructed, where appropriate, to intercept, divert, and collect surface runoff and convey accumulated runoff to an acceptable outlet point, thereby improving water quality compared to the No Action Alternative. 	<ul style="list-style-type: none"> ❖ Stormwater runoff that falls within CDOT ROW will be captured and treated to comply with the CDPS MS4 permit and the CDOT New Development and Redevelopment Stormwater Management Program. ❖ Water quality ponds or similarly efficient pollutant removal devices, in compliance with the CDPS MS4 permit requirements will be placed adjacent to I-25 to treat stormwater from increased impervious surface area. A water quality pond will be placed in the infield area of the Ilex ramp, east of the Interstate. An additional pond or vault could be placed north of the railroad between I-25 and Santa Fe Avenue. Three water quality vaults and six additional water quality ponds are included as part of Phase 1. The sizing and design of these facilities will be refined during the final project design. Alternative BMPs will be evaluated during final design. Mitigation measures are described in more detail in Section 3.15 Water Quality. ❖ A CDPS General Permit for Stormwater Discharges Associated with Construction Activities will be required (COR030000). During construction, sediment will be trapped and collected, erosion will be controlled, and construction-related pollutants will be minimized to the maximum extent practical. Temporary construction BMPs (described in more detail in Section 3.15 Water Quality) will be employed to mitigate impacts to water bodies as a result of construction. These BMPs will adhere to Section 208 Erosion Control and other related sections of the 2011 CDOT Standard Specifications for Road and Bridge Construction.
UTILITIES	
<ul style="list-style-type: none"> ❖ Phase 1 construction would impact the above- and below-ground utility lines located adjacent to and across I-25, including those concentrated at 4th Street, 8th Street, and 29th Street. 	<ul style="list-style-type: none"> ❖ During final design for Phase 1, the location of all utilities in the corridor will be confirmed by field investigations, including locating lines below ground. Alternate delivery systems will be provided to ensure uninterrupted service, and lines or stations will be relocated as needed. When appropriate, CDOT will look for opportunities to provide space for new utilities or upgrade existing ones. If, during future design efforts, impacts to potentially historic utility lines are identified, CDOT will engage in Section 106 consultation with the SHPO and consulting parties regarding the resource.
ENERGY	
<ul style="list-style-type: none"> ❖ On a daily basis, the difference in energy use between Phase 1 of the Preferred Alternative and the No Action Alternative is negligible. ❖ Construction of the 36.07 total lane miles for Phase 1 would require 863,400 million British thermal units (Btu[s]). Additional energy would be expended as a result of a longer construction period required for project phasing and the need to reconstruct portions of the project during later phases. 	<ul style="list-style-type: none"> ❖ To the extent practical, CDOT will implement sustainability practices into the project planning, construction, and maintenance to reduce energy use. Mitigation measures are described in more detail in Section 3.17 Energy.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
NOXIOUS WEEDS	
<ul style="list-style-type: none"> ❖ Ground disturbance and other construction activities in the project area could expand areas already infested with noxious weeds, spread weeds to adjacent land and wetland and riparian habitats nearby, and introduce new weed species to the project area. Construction activities in the project area would cause vegetation removal and ground disturbance. ❖ The potential for the spread of invasive species would increase as a result of a longer construction period resulting from phasing and the need to redisturb land when portions of the project are reconstructed during later phases. 	<ul style="list-style-type: none"> ❖ Prior to the start of construction activities for Phase 1, CDOT will develop and implement a Noxious Weed Management Plan that incorporates herbicides, mechanical removal, and potential biological controls (in accordance with the Colorado Noxious Weed Act) to control and prevent weed infestation and spread. CDOT will provide the Noxious Weed Management Plan to CPW for review prior to its completion. During construction, standard BMPs (described in more detail in Section 3.18 Noxious Weeds) will be used to observe, treat, control, and/or remove noxious weeds from the disturbed area in accordance with the Noxious Weed Management Plan. After construction, disturbed areas will be reclaimed immediately and CDOT ROW will be managed through standard CDOT maintenance operations. All construction equipment will be washed thoroughly. ❖ Certified weed-free seed mixes and straw bales for use in stormwater management and erosion control will be specified in the construction plan sets.
PALEONTOLOGICAL RESOURCES	
<ul style="list-style-type: none"> ❖ Phase 1 would not affect any known significant paleontological resources. 	<ul style="list-style-type: none"> ❖ If any fossils or other paleontological resources are found anywhere in the project area during construction, construction activities will be halted and the CDOT staff paleontologist will be contacted immediately to assess the significance of the find and make further recommendations.
SOILS AND GEOLOGY	
<ul style="list-style-type: none"> ❖ Phase 1 construction activities have the potential to encounter unstable soils or geologic hazards that would require mitigation prior to construction. 	<ul style="list-style-type: none"> ❖ A detailed geotechnical and soils analysis of the subsurface will be performed during final design for each phase.

EXHIBIT 5-3**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 1**

Impacts	Mitigation
SECTION 4(f) RESOURCES	
<p>❖ Phase 1 would impact 23 of the 39 Section 4(f) resources impacted by the Preferred Alternative: 19 historic properties, 2 historic districts (North Side and Second Ward), 1 historic park (Mineral Palace Park), and 1 parkland (Fountain Creek Park Land). FHWA has made a preliminary determination that there is no feasible and prudent avoidance alternative to the use of Section 4(f) property for the Preferred Alternative, as demonstrated in Chapter 4 – Section 4(f) Evaluation. Phase 1 impacts to Section 4(f) properties are, therefore, unavoidable. The Preferred Alternative incorporates all possible planning to minimize harm to Section 4(f) properties to the extent possible at the DEIS level of project design and development.</p>	<p>❖ To alleviate forecasted noise from I-25, noise mitigation structures (where appropriate) will be constructed. Mitigation measures are described in more detail in Section 3.5 Noise.</p> <p>❖ City staff and citizens participated in an extensive public involvement process to determine adequate mitigation for impacts to Mineral Palace Park. This process resulted in the development of a restoration plan for the park (described in more detail in Section 3.3 Parks and Recreation). The restoration will adhere to a theme of celebrating the past and connecting to neighborhoods.</p> <p>❖ Water treatment ponds will be constructed to treat highway runoff from I-25, resulting in improved water quality in Fountain Creek and in the riparian and wetland habitat areas adjacent to the creek. Trails and picnic areas will also be incorporated.</p> <p>❖ CDOT will construct a pedestrian bridge to provide access to the Fountain Creek Park Land from Mineral Palace Park and its surrounding neighborhood.</p> <p>❖ CDOT will provide advance notice to the public of temporary trail detours and/or closures of the Fountain Creek Trail and Thomas Phelps Trail during construction. Access will be maintained throughout construction to minimize impacts to users.</p> <p>❖ A Programmatic Agreement has been developed by FHWA, CDOT, and the SHPO to outline mitigation for adverse effects to historic properties. The Programmatic Agreement identifies specific categories of mitigation for further consultation and investigation, including resource relocation, interpretive mitigation, and archival documentation. Mitigation measures are described in more detail in Section 3.2 Historic Properties and Appendix H.</p>

¹ Section 6(f)(3) assisted properties include parks and recreational facilities that have been acquired through the use of grants from the Land and Water Conservation Fund (LWCF) Act of 1965. Section 6(f) of the LWCF Act ensures that federal investments in the LWCF are maintained for public outdoor recreational use. The LWCF Act requires that, prior to conversion of Section 6(f)(3) assisted property, the agency proposing the conversion must evaluate all practical alternatives to the conversion and identify adequate replacement property.

ACM = asbestos containing materials

BFE = base flood elevation

BMP = best management practice

Btu = British thermal unit

CDOT = Colorado Department of Transportation

CDPHE = Colorado Department of Public Health and Environment

CDPS = Colorado Discharge Permit System

CPW = Colorado Parks and Wildlife

DEIS = Draft Environmental Impact Statement

DOI = U.S. Department of the Interior

EO = Executive Order

FHWA = Federal Highway Administration

ISA = Initial Site Assessment

LWCF = Land and Water Conservation Fund

MS4 = Municipal Separate Stormwater Sewer System

MSAT = Mobile Source Air Toxics

NAAQS = National Ambient Air Quality Standards

PM₁₀ = particulate matter less than 10 microns

REC = recognized environmental conditions

ROW = right-of-way

SB = Senate Bill

SHPO = State Historic Preservation Officer

USACE = U.S. Army Corps of Engineers

VMT = vehicle miles traveled

5.2.2 Phase 2 – Central and South Area

Description of Improvements

Phase 2 consists of two projects that include highway widening and interchange reconstruction from the Ilex Street bridges south to mp 94, as described in **Chapter 2 – Alternatives, Section 2.6.3**. The alignment of I-25 would be shifted east in this phase from Ilex Street to south of Indiana Avenue. Local road improvements such as Stanton Avenue, Locust Street, and the Santa Fe Avenue extension would also be included in Phase 2. The expected cost for this phase is \$437.5 million (2010 dollars²).

Mitigation elements such as trail connections, noise walls, Benedict Park, and water quality ponds in Phase 2 will be built along with the adjacent improvements as each project is constructed (described in **Exhibit 5-4**). **Section 3.3 Parks and Recreation, Section 3.5 Noise and Section 3.15 Water Quality** provide more details on these proposed mitigations.

Due to funding limitations, the entire dollar amount required for Phase 2 may not be available at one time. Phase 2 does not necessarily need to be selected in its entirety in subsequent RODs. This will be determined at the time of a subsequent ROD, considering available funding, priorities at that time, and the results of any reevaluation that may be needed. Future funding availability will play a major role in determining when construction begins and the priority and schedule under which the projects within this phase can be implemented. As required by 23 CFR 771.111(f), these improvements are considered a reasonable expenditure of funds and would incrementally contribute to addressing the Purpose and Need of the project, even if no additional transportation improvements are made in the area. This is described for each construction project in Phase 2.

The termini for Phase 2 have been selected as the Ilex bridges on the north and mp 94 on the south, which corresponds to the Central Area and South Area evaluated in **Chapter 3 – Affected Environment and Environmental Consequences**. The Ilex bridges were selected as the northern terminus because it is where Phase 2 ties into the

improvements that would be completed as a part of Phase 1 and because this is where the shift in the mainline alignment of I-25 (from Ilex Street to Nevada Avenue) begins. The southern terminus was selected as mp 94 because this is where the character of the corridor becomes more rural in nature in conjunction with the southern City boundaries. Because the PACOG is forecasting that future growth to the south of the City of Pueblo will be minimal, it is not logical to extend improvements further south of this point. The improvements proposed in Phase 2 would have independent utility in that each element would provide transportation benefits, would be a reasonable expenditure even if no additional improvements are made in the area, and would connect logical termini. In addition, Phase 2 would not restrict the consideration of alternatives for other reasonably foreseeable transportation improvements.

The two projects proposed for Phase 2 are as follows:

- ❖ **Ilex Street to Pueblo Boulevard.** This project includes the reconstruction of I-25 from Ilex Street to the Pueblo Boulevard interchange and interchange reconstruction at Abriendo Avenue, Northern Avenue, and Indiana Avenue. The highway alignment would be shifted to the east, and the existing I-25 would be converted to a local arterial road to become an extension of Santa Fe Avenue, providing off-highway access to and from downtown Pueblo from the south. The Stanton Avenue extension also would be completed as a part of this project. This construction project addresses the *safety* element of the Purpose and Need by correcting geometric deficiencies such as tight curves, steep grades, inadequate clear zones, inadequate stopping sight distances, poor ramp design and inadequate ramp lengths, ramps that connect to local streets, and insufficient shoulder widths. These deficiencies on this section of I-25 result in fair to poor accident ratings. This construction project also addresses the *mobility* element of the Purpose and Need by: substantially increasing north/south mobility by constructing the Santa Fe extension and Stanton Avenue; increasing east/west mobility by connecting Abriendo Avenue to Santa Fe Drive across I-25; reconnecting neighborhoods that were severed by the original construction of I-25; increasing capacity on I-25 between Ilex Street and Indiana Avenue while reducing demand on I-25 as a result of the Santa Fe Avenue extension; and replacing aging bridges with inadequate sufficiency ratings. The Mesa Avenue, Northern

² Because the year of expenditure is unknown for future phases of construction, dollar amounts for Phase 2 are reported in 2010 dollars. These costs may be understated or overstated depending on economic factors such as material costs and inflation.

Avenue, and Indiana Avenue bridges that would be replaced in this construction project have among the lowest sufficiency ratings in the 7-mile project area on I-25, and all three are considered structurally deficient.

- ❖ **Pueblo Boulevard Interchange.** This project includes widening and reconstructing I-25 south of Pueblo Boulevard to mp 94, north of the Pueblo Boulevard Interchange, and realignment of Greenhorn Drive. This Pueblo Boulevard interchange addresses the *mobility* element of the Purpose and Need by improving regional connectivity between I-25 and a state highway (Pueblo Boulevard is SH 45). The reconstructed interchange provides free-flow access for traffic on Pueblo Boulevard to access northbound I-25.

EXHIBIT 5-4

Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2

Impacts	Mitigation
TRANSPORTATION	
<ul style="list-style-type: none"> ❖ Phase 2 would upgrade interchanges to current design standards, improve interchange spacing, and provide connectivity to appropriate local streets. ❖ Phase 2 would restore off-highway connections that were removed during original I-25 construction. It would provide alternative north-south routes for local users on Santa Fe Avenue, reduce demand on I-25, and increase local mobility and east-west access by reconstructing the Northern Avenue interchange and constructing a frontage road system. The extension of Santa Fe Avenue and Stanton Avenue would reestablish 23 miles of local grid system and improve safety and local mobility. ❖ Phase 2 would replace 6 bridges that have a low sufficiency rating. ❖ Phase 2 improvements would correct operational deficiencies and provide additional capacity on I-25 to reduce congestion between Ilex Street and Indiana Avenue and accommodate future travel demands. Construction of the project in phases would not result in any bottlenecks or unacceptable traffic conditions. ❖ Construction of Phase 2 would cause temporary impacts to the railroads during bridge construction. An internal steel mill railroad line adjacent to Northern Avenue would have to be realigned on steel mill property. ❖ Phase 2 would require modifications to Transit Route 11 because of the reconfiguration of Santa Fe Avenue and Stanton Avenue. ❖ Pedestrian and bicycle mobility would be improved through provisions of multi-modal elements in Phase 2 such as trails and sidewalks. Construction of pedestrian trails and sidewalks connecting the Runyon Field Sports Complex and JJ Raigoza Park would improve pedestrian and bicycle mobility. 	<ul style="list-style-type: none"> ❖ To minimize the impact of construction on bus routing and service, CDOT will coordinate with the Pueblo Transit System prior to and throughout construction of Phase 2. ❖ CDOT will follow appropriate permitting, including coordination with the railroads for impacts to the rail lines during bridge construction for Phase 2. CDOT will coordinate with the Evraz Rocky Mountain Steel Mill for the realignment of the company's internal rail line. ❖ CDOT will revisit the off-street trail concept between JJ Raigoza Park and the Runyon Field Sports Complex during final engineering design. CDOT will survey each property owner along the east side of Evans Avenue between Minnequa Avenue and Illinois Avenues to determine the interest in converting the alleyway to a dedicated non-motorized facility. ❖ CDOT will conduct public information efforts, including development of a Public Information Plan (described in more detail in Section 3.1 Transportation) to inform the public and affected businesses in advance of lane closures, detours, and interchange reconstruction activities. ❖ CDOT will maintain safe business access during construction of Phase 2. ❖ CDOT will develop a Traffic Control Plan during final design that will detail strategies (described in more detail in Section 3.1 Transportation) to minimize traffic disruption from construction activities. Whenever possible, the existing number of lanes will be maintained throughout construction. Speed limits will be reduced in work zones. Access to properties will be maintained at all times. ❖ A mitigation monitoring and implementation plan will be developed during final project design. Commitments to mitigate for both construction and operational effects of the Preferred Alternative will be modified or adapted, if needed, based on the final design.

Environmental Impacts and Mitigation

Exhibit 5-4 summarizes the environmental impacts and associated mitigation measures associated with the implementation of Phase 2. Mitigation measures included in **Exhibit 5-4** would be completed in conjunction with construction of Phase 2 improvements.

5.3 PROJECT PROCESS AND DELIVERY

The Preferred Alternative has been designed to a planning level of detail, allowing engineers and planners to investigate the environmental impacts and the costs as disclosed in this FEIS. Upon completion of the FEIS, a ROD will be issued. If a Build Alternative is approved, CDOT will begin the design and construction process of the approved phase.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
<ul style="list-style-type: none"> ❖ Construction of Phase 2 would cause temporary impacts to traffic such as changes in access, delay caused by lane closures, out-of-direction travel incurred due to detours, and other similar unavoidable impacts caused by construction-related activities. As a result of phasing, the construction period of the project would be longer, resulting in more detours and traffic delays that would inconvenience residents and businesses during construction. 	
HISTORIC PROPERTIES	
<ul style="list-style-type: none"> ❖ Phase 2 will result in adverse effects to 14 historic resources, including the Steelworks Suburbs Historic District and Grove Historic District. ❖ Phase 2 will result in adverse effects to 2 historic archaeological sites and has the potential to impact 1 Need Data historic archaeological site. 	<ul style="list-style-type: none"> ❖ A Programmatic Agreement has been developed by FHWA, CDOT, and the SHPO to outline mitigation for adverse effects to historic properties. The Programmatic Agreement identifies specific categories of mitigation for further consultation and investigation, including resource relocation, interpretive mitigation, and archival documentation. Mitigation measures are described in more detail in Section 3.2 Historic Properties and Appendix H. ❖ A Programmatic Agreement has been developed by FHWA, CDOT, and the SHPO to outline mitigation for adverse effects to historic properties. The Programmatic Agreement includes stipulations for historic archaeological data recovery excavations and testing, as described in Section 3.2 Historic Properties and Appendix H.
PARKS AND RECREATION	
<ul style="list-style-type: none"> ❖ Under Phase 2, JJ Raigoza Park would potentially be impacted by noise without implementation of mitigation measures. ❖ Temporary detours and/or closures of the Arkansas River Trail would be required to protect the public when construction of Phase 2 is occurring above the trail. ❖ Realignment of I-25 to the east in Phase 2 requires total acquisition of Benedict Park (1.92 acres) and its facilities and the conversion of Section 6(f)(3) assisted property to a transportation use.¹ ❖ Extension of Stanton Avenue in Phase 2 would positively impact the Runyon Field Sports Complex by providing access to the park from the local road network instead of I-25 and minimizing traffic queues on I-25. ❖ Realignment of I-25 to the east would require the construction of four new bridges over the Arkansas River (with 18 bridge piers) and the relocation of trails and an existing pedestrian bridge. Land acquisition and the demolition of the existing pedestrian bridge constitutes a conversion of Section 6(f)(3) assisted property to a transportation use.¹ 	<ul style="list-style-type: none"> ❖ To alleviate forecasted noise from I-25, noise mitigation structures will be constructed. Mitigation measures are described in more detail in Section 3.5 Noise. ❖ CDOT will provide advance notice to the public of temporary detours and/or closures of the Arkansas River Trail during construction. Access will be maintained as much as possible to minimize impacts to users. ❖ Mitigation for impacts to Benedict Park includes a new 3.93-acre to 4.30-acre Benedict Park to be built south of the existing park location between Mesa Avenue and Northern Avenue using remnant parcels of land resulting from changes in the roadway network. This range reflects ongoing efforts to refine the design to avoid impacts to residential parcels south of Mesa Avenue. Mitigation measures are described in more detail in Section 3.3 Parks and Recreation. ❖ The pedestrian bridge over the Arkansas River would be relocated just east of the proposed Stanton Avenue bridge to allow room for the new bridges that will span the river east of the current I-25 alignment. The trail would be relocated over the new pedestrian bridge. Mitigation measures are described in more detail in Section 3.3 Parks and Recreation. ❖ CDOT will ensure there is an equal value exchange for all Section 6(f)(3) property acquired in accordance with the requirements of the LWCF Act.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
	<ul style="list-style-type: none"> ❖ CDOT has coordinated with CPW and the DOI with regard to the conversion of Section 6(f)(3) assisted property (see correspondence dated June 25, 2012 and July 10, 2012 in Appendix B). The official conversion request and DOI concurrence will occur prior to project completion, and the value of the land will be assessed prior to DOI final approval. ❖ Prior to conversion of Section 6(f)(3) assisted property (Benedict Park and the Arkansas River Pedestrian Bridge), the agency proposing the conversion must ensure that all practical alternatives to the conversion have been evaluated and rejected on a sound basis. Section 3.6 Parks and Recreation has additional details on the proposed conversion.
RIGHT-OF-WAY AND RELOCATIONS	
<ul style="list-style-type: none"> ❖ Construction of Phase 2 would require a total of 207 acquisitions (172 total and 35 partial). ❖ Residential impacts from Phase 2 include 101 total acquisitions and 0 partial acquisitions. ❖ Commercial impacts from Phase 2 include 28 total acquisitions and 14 partial acquisitions. ❖ Vacant undeveloped impacts from Phase 2 include 37 total acquisitions and 17 partial acquisitions. ❖ A total of 40 businesses would be displaced by the construction of Phase 2. ❖ Public impacts from Phase 2 include 6 total acquisitions and 4 partial acquisitions. 	<ul style="list-style-type: none"> ❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. All impacted owners will be provided notification of CDOT's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests. A ROW Agent will be assigned to each property owner to assist with this process. Mitigation measures are described in more detail in Section 3.4 Right-of-Way and Relocations. ❖ Phase 2 impacts to public properties are considered mutually beneficial, and the Memorandum of Understanding between CDOT and the City (see Appendix F) specifies the future land exchange, ownership, and maintenance responsibilities. A future Intergovernmental Agreement will address ownership of excess ROW. Mitigation measures are described in more detail in Section 3.4 Right-of-Way and Relocations.
NOISE	
<ul style="list-style-type: none"> ❖ Three receptors would meet or exceed CDOT's noise abatement criteria with the implementation of Phase 2 improvements: Aqua and Evans, JJ Raigoza Park, and residences at Iowa Avenue and Evans Avenue. The impacted receptor at Locust and Moffat Street would be acquired; therefore, it is not included herein. ❖ Construction of Phase 2 would create temporary noise impacts. 	<ul style="list-style-type: none"> ❖ For Phase 2, a total of 4,840 feet of noise walls would be constructed to mitigate noise impacts. Noise walls were determined to be the most appropriate mitigation strategy. Mitigation measures are described in more detail in Section 3.5 Noise. Additional noise analysis will be performed during final project design to refine the final mitigation measures and dimensions. ❖ Additional noise analysis will be performed during final design to refine the final mitigation measures and dimensions. As part of the CDOT Noise Analysis and Abatement Guidelines (CDOT, 2011a), CDOT shall solicit current residential occupants and property owners' opinions on whether to build or not build the abatement measures recommended for the Modified I-25 Alternative (Preferred Alternative). A vote of equal standing will be provided one resident and one owner per benefited dwelling unit prior to the signing of the ROD. ❖ When construction occurs in residential areas or other noise-sensitive areas, such as parks or hospitals, construction noise will be mitigated by restricting construction to daylight hours when possible and requiring contractors to use well-maintained equipment, including muffler systems.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
SOCIAL RESOURCES, ECONOMIC CONDITIONS, AND ENVIRONMENTAL JUSTICE	
<ul style="list-style-type: none"> ❖ Community cohesion in the Bessemer Neighborhood would be positively impacted by improved local roadway and trail systems as a result of Phase 2. ❖ Phase 2 construction would require acquisition of 66 residences from the Bessemer Neighborhood. ❖ A total of 40 businesses would be displaced by the construction of Phase 2, and these business relocations would impact employment. However the implementation of Phase 2 would generate direct and indirect employment opportunities throughout construction. ❖ Economic impacts are largely tied to ROW acquisitions through loss of tax revenue and displaced businesses and residences. As a result of phasing, the construction period of the project would be lengthened, resulting in more disruptions to businesses adjacent to the corridor and detours and traffic delays that would inconvenience residents, businesses, and community facilities during construction over the course of the project. At the same time, there would be an economic benefit to the area from the multiple construction mobilizations and the need for additional construction workers. ❖ Impacts from Phase 2 would be predominantly borne by minority and low-income populations. When offsetting benefits from the project and proposed mitigation are also considered, these impacts would not be considered disproportionately high and adverse. Although residential and commercial relocations would be from within minority and low-income neighborhoods, both renters and owners will be compensated for acquisition and provided relocation benefits in accordance with the Uniform Act. Residential acquisitions from the Bessemer Neighborhood would be offset by the additional connectivity provided by the extension of Stanton Avenue and Santa Fe Drive. Although some jobs would be lost, many would be relocated and the project itself would generate new employment opportunities. Noise walls would be constructed to mitigate noise impacts. Visual impacts would be lessened through design consistent with <i>New Pueblo Freeway Aesthetic Guidelines</i> (see Appendix C). <p>Construction-related nuisances would be greatest for the minority and low-income residents adjacent to Phase 2 construction activities, but impacts would be temporary and would be lessened through a variety of mitigations including a Traffic Control Plan, Public Information Plan, restrictions on night-time construction, equipment requirements, signage, and well marked detours. Minority and low-income residents serve to benefit most from the improvements that would result from Phase 2. These include enhanced safety and local mobility, new pedestrian facilities and connections, the reconstruction and expansion of Benedict Park, restored neighborhood connections, and improvements in community cohesion.</p>	<ul style="list-style-type: none"> ❖ All property acquisition and relocation will comply fully with federal and state requirements, including the Uniform Act. Mitigation measures are described in more detail in Section 3.4 Right-of-Way and Relocations. ❖ Relocation areas for businesses serving the City and the region will be identified. Efforts will be made to relocate businesses that are displaced within the City limits in order to maintain property and sales tax revenues to the City. Mitigation measures are described in more detail in Section 3.6 Social Resources, Economic Conditions, and Environmental Justice. ❖ CDOT will make a Public Information Plan available throughout construction. This plan and any information on construction activities and detours will be provided in both English and Spanish. Mitigation measures are described in more detail in Section 3.1 Transportation. ❖ Signage and detours will be set in place to direct traffic to businesses, residences, and community facilities adjacent to construction. ❖ CDOT will provide advance notice to emergency service providers, Colorado State Patrol, schools, the community, and residents regarding road delays, access, and special construction activities. ❖ Aesthetic enhancements of the highway improvements will be implemented as agreed upon in the Memorandum of Understanding between the City and CDOT (see Appendix F).

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
WETLANDS <ul style="list-style-type: none"> ❖ Phase 2 would result in a direct loss of 0.95 acre of wetlands. 	
LAND USE	
<ul style="list-style-type: none"> ❖ Phase 2 improvements are not consistent with current land uses where the alignment of I-25 shifts to the east. However, they are consistent with future land use plans, including urban residential, urban mixed use, and light industrial employment centers. 	<ul style="list-style-type: none"> ❖ Wetland boundaries will be reevaluated to determine the need for additional delineations once construction funding has been identified. ❖ CDOT will obtain the appropriate Section 404 permit from the USACE under Section 404 of the Clean Water Act prior to construction of Phase 2. CDOT FHWA will work with the USACE to identify a suitable site for wetland mitigation that would replace the functional values impacted by the project. CDOT will coordinate potential wetland mitigation locations with CPW and will provide CPW with the Section 404 permit for review. CDOT will replace impacted wetlands on a 1:1 basis regardless of jurisdictional determination. Additional mitigation measures identified by the USACE may also include placing tree cuttings at various locations near the project area. Mitigation measures are described in more detail in Section 3.7 Wetlands. ❖ Following final design, CDOT will apply for a SB 40 Wildlife Certification, if the project does not fall within CDOT's Programmatic Agreement with CPW, including detailed plans and specifications.
VISUAL RESOURCES	
AIR QUALITY	
<ul style="list-style-type: none"> ❖ Phase 2 improvements would alter the Steel Mill viewshed by introducing new roadway modifications and removing the smoke stacks and stoves from the Evraz Rocky Mountain Steel Mills site. The increased mass of the highway and presence of new elements associated with the roadway (such as noise barriers and water quality ponds) would increase the highway's visual presence on the existing neighborhoods along I-25. ❖ As a result of the longer construction period, visual impacts such as exposed soils, staging areas, and construction lighting would occur over a longer time period, resulting in additional impacts to adjacent communities. ❖ No NAAQS violations for carbon monoxide are expected for Phase 2. ❖ Exceedance of NAAQS for PM10 is not expected for Phase 2. ❖ MSAT emissions are proportionate to the increase in VMT in Phase 2 compared to the No Action Alternative. ❖ As a result of the longer construction period, impacts from excavation, grading, and fill work that could increase local fugitive dust and exhaust emissions would occur over a longer time period. However, with the implementation of BMPs, the effect of this impact would be negligible. 	<ul style="list-style-type: none"> ❖ Mitigation for impacts to visual resources will be addressed during final design of all Phase 2 elements. Mitigations such as sound walls and bridges will be designed for compatibility with the theme in the area consistent with the <i>New Pueblo Freeway Aesthetic Guidelines</i> (see Appendix C). ❖ Because no adverse air quality impacts are anticipated to occur as the result of the proposed improvement, mitigation is not required from an air quality standpoint. ❖ BMPs (described in more detail in Section 3.10 Air Quality) would be implemented to control dust during construction of Phase 2. ❖ CDOT will coordinate with Evraz Rocky Mountain Steel Mills during the preparation of future RODs regarding property acquisition under the Modified I-25 (Preferred Alternative) and its effect on steel mill air quality permitting.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
HAZARDOUS MATERIALS <ul style="list-style-type: none"> ❖ Construction of Phase 2 would impact the Greenhorn Drive area and the VAE Nortrak North America site, both sites of potential environmental concern. ❖ Construction of Phase 2 would impact four REC sites: the Pepsi-Cola Bottling Company, the Colorado Smelter & Santa Fe Culvert Sites, and the Evraz Rocky Mountain Steel Mills property and slag piles. ❖ All bridges replaced as part of Phase 2 may be coated with lead-based paint. ❖ As with any construction project that involves excavation, there is the potential to unearth buried construction debris during construction of Phase 2. Such unforeseen debris sometimes can include ACM that requires special handling and disposal. Byproducts of steel manufacturing shot and slag have been stockpiled at the Evraz Rocky Mountain Steel Mill site and will likely be encountered during construction. Special waste handling and excavation requirements would be necessary during construction. 	
<ul style="list-style-type: none"> ❖ A site-specific Phase I Environmental Site Assessment or ISA will be conducted prior to construction or acquisition of any site. The nature and extent of any soil or groundwater contamination will be assessed to determine whether remediation will be required or modifications to project design can be made. ❖ A Phase II ISA may be performed on RECs or areas of potential environmental concern. Contaminated material will be dealt with in accordance with environmental regulations. Prior to construction, a Health and Safety Plan will be developed. ❖ A Materials Management Plan, which includes handling of ACM, and a Health and Safety Plan will be developed for areas with known soil and groundwater contamination. The level of remediation will be determined in accordance with applicable federal and state laws, based on the final project alignment, ROW requirements, and degree of subsurface disturbance during construction. ❖ Engineering controls will be considered to minimize potential disposal costs and to avoid contamination. ❖ If dewatering is necessary, groundwater will be managed according to applicable regulations and permitted by the CDPHE Water Quality Control Division. ❖ Groundwater monitoring wells at the Pepsi Cola Bottling Company site that are abandoned will be plugged in compliance with the Colorado Department of Natural Resources Division of Water Resources State Engineer Water Well Construction Rules. ❖ Prior to demolition of structures, sites will be surveyed for any regulated materials. CDOT will meet all state and Federal regulations pertaining to demolition of buildings and other structures. Regulated materials must be removed from structures prior to demolition and appropriately recycled or disposed. ❖ CDOT will evaluate and recommend remediation for any potential ACM, including landfill material, construction debris, utilities, or other materials. Appropriate CDOT specifications will be followed regarding the potential for asbestos-containing construction debris in soil. ❖ Byproducts of steel manufacturing shot and slag will likely be encountered during construction at the Evraz Rocky Mountain Steel Mills. Special waste handling and excavation requirements will be developed once the chemical composition and volume of the material is known. Mitigation measures are described in more detail in Section 3.11 Hazardous Materials. 	

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
FISH AND WILDLIFE HABITAT	
<ul style="list-style-type: none"> ❖ Construction of Phase 2 would result in the direct loss of 13.06 acres of wildlife habitat. ❖ Construction of Phase 2 could result in a loss of low-quality nesting habitat for migratory birds. ❖ Construction of new bridge piers over the Arkansas River in Phase 2 would impact 0.08 acre of open water. ❖ Construction of Phase 2 would result in noise from construction activities that could affect wildlife species and temporarily displace priority bird species. Construction activities could also affect wildlife by removing vegetation and wildlife habitats. 	<ul style="list-style-type: none"> ❖ Habitat replacement, restoration, or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas along Fountain Creek (described in more detail in Section 3.12 Fish and Wildlife Habitat). Wildlife surveys will be done prior to final design and construction to identify additional opportunities to avoid and minimize impacts to fish and wildlife habitats, including surveying for the presence of bird nests, prairie dogs, and burrowing owls. Nests will be removed from structures prior to April 1 before the nesting season begins. ❖ Field surveys will be conducted prior to construction to determine the presence or absence of birds protected under the Migratory Bird Treaty Act. Prior to the removal of trees, shrubs, and grasses, a bird nesting survey will be conducted. If an active nest is found, construction activities with a potential to impact the success of the nest will not be allowed until the young have fledged or until the nest becomes inactive. Trees that are removed will be mitigated at a 1:1 ratio or as specified by state and federal wildlife agencies to ensure raptor perch trees are replaced for future use. Mitigation measures are described in more detail in Section 3.12 Fish and Wildlife Habitat. ❖ CDOT will adhere to the requirements of SB 40 Wildlife Certification for impacts to open water and riparian habitats. Mitigation measures are described in more detail in Section 3.12 Fish and Wildlife Habitat. ❖ BMPs (described in more detail in Section 3.12 Fish and Wildlife Habitat) such as limiting sedimentation, revegetation, and clearly marking construction boundaries to prevent equipment or other intrusion into habitat located outside the construction zone will be adopted to minimize construction impacts on wildlife and habitat resources within the study area. A concrete washout area will be provided at suitable locations within the CDOT ROW during construction. Mitigation measures are described in more detail in Section 3.12 Fish and Wildlife Habitat. ❖ Updated wildlife surveys will be completed prior to construction, including surveys of prairie dogs and burrowing owls. CDOT will coordinate with CPW on the results of the wildlife surveys prior to construction and will seek input on impact avoidance and mitigation plans. ❖ To avoid injury or mortality to bat species, CDOT will survey for bats prior to repairing or replacing bridges, and if found, efforts will be made to remove them humanely. ❖ All bridge work on the project will be performed in accordance with appropriate CDOT Standard Specifications for Roadway and Bridge Construction and will comply with applicable laws and MOAs.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
SENSITIVE SPECIES <ul style="list-style-type: none"> ❖ Phase 2 would impact 3.58 acres of plains leopard frog habitat. ❖ Phase 2 would impact 0.02 acre of Arkansas darter habitat. 	
FLOODPLAINS <ul style="list-style-type: none"> ❖ Impacts to the Arkansas River floodplain under Phase 2 would be located east of the existing bridge and include a new transverse encroachment on the floodplain and floodway. River velocity in this location is low (less than 2 feet per second), and the impacts of encroachment for a new bridge are minimal. Implementation of Phase 2 would not result in flooding of any new areas that are not within the existing 100-year floodplain. 	

- ❖ The mitigation measures to compensate for impacts on wetlands, flowing water, and riparian habitats used by the Arkansas darter and plains leopard frog are described in **Sections 3.7 Wetlands, 3.12 Fish and Wildlife, 3.15 Water Quality, and 3.18 Noxious Weeds**. These mitigations might benefit terrestrial and aquatic plant and wildlife species by improving and protecting potential habitat along the Arkansas River and the Arkansas River floodplain. Implementing these mitigation measures might enlarge the size of contiguous blocks of wetland and riparian habitats, improve habitat connectivity, and enhance functions of the existing habitat. Such results would provide functional benefits for sensitive species.
 - ❖ Habitat restoration or enhancement will be conducted to mitigate for impacts that cannot be avoided, including impacts to the wetland and riparian areas adjacent to the Arkansas River. Mitigation measures are described in more detail in Section 3.13 Sensitive Species.
 - ❖ A SB 40 permit will be obtained by CDOT prior to Phase 2 construction.
 - ❖ Wildlife surveys will be completed prior to construction. CDOT will coordinate with CPW on the results of the wildlife surveys prior to construction and will seek input on impact avoidance and mitigation plans. Pre-construction surveys will be conducted for all T&E species, including prairie dogs and burrowing owls.
- ❖ Impacts to the Arkansas River floodplain and floodway are expected to be minimal, and required mitigation measures will be limited to erosion protection for bridge structures. Foundations of new bridge structures will be designed to limit scour, and proposed abutments within the floodplain will be protected from erosion. Measures that may be used to protect the bridges include rip rap armoring of banks and slope paving.
 - ❖ Floodplain mitigation will comply with EO 11988, "Floodplain Management," during design of any selected alternative. State of Colorado drainage design standards will be applied to achieve results that will not increase or significantly change flood elevations and/or limits.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
WATER QUALITY	
<ul style="list-style-type: none"> ❖ Phase 2 improvements and additional traffic on I-25 in the future will generate more pollutants. BMPs in compliance with the CDPS MS4 permit requirements are designed to decrease the amount of pollutants actually entering the waters and are expected to lower the amount of pollutants for Phase 2 compared to the No Action Alternative. ❖ Phase 2 construction would remove vegetation and create bare surfaces that may create erosion and sedimentation issues. All highway runoff will be collected and treated to the level required by CDOT's New Development and Redevelopment Program. BMPs can be constructed, where appropriate, to intercept, divert, and collect surface runoff and convey accumulated runoff to an acceptable outlet point, thereby improving water quality compared with the No Action Alternative. 	<ul style="list-style-type: none"> ❖ Stormwater runoff that falls within CDOT ROW will be captured and treated to comply with the CDPS MS4 permit and the CDOT New Development and Redevelopment Stormwater Management Program. ❖ Water quality ponds or similarly efficient pollutant removal devices, in compliance with the CDPS MS4 permit requirements will be placed adjacent to I-25 to treat stormwater from increased impervious surface area. Eight water quality ponds are included as part of Phase 2. The sizing and design of these ponds will be refined during the final project design. Alternative BMPs will be evaluated during final design. Mitigation measures are described in more detail in Section 3.15 Water Quality. ❖ A CDPS General Permit for Stormwater Discharges Associated with Construction Activities will be required (COR030000). During construction, sediment will be trapped and collected, erosion will be controlled, and construction-related pollutants will be minimized to the maximum extent practical. Temporary construction BMPs (described in more detail in Section 3.15 Water Quality) will be employed to mitigate impacts to water bodies as a result of construction. These BMPs will adhere to Section 208 Erosion Control and other related sections of the 2011 CDOT Standard Specifications for Road and Bridge Construction.
UTILITIES	
<ul style="list-style-type: none"> ❖ Phase 2 would impact the above- and below-ground utility lines located adjacent to and across I-25, including those concentrated at Pueblo Boulevard, Mesa Avenue, those concentrated at Northern Avenue and the north and south banks of the Arkansas River. ❖ Construction of Phase 2 would require a new crossing for I-25 over the Bessemer Ditch. ❖ Phase 2 improvements would encroach on the alternate coolant water line at the Evraz Rocky Mountain Steel Mills. The primary line could be impacted during construction. ❖ Xcel Energy's south town natural gas transfer station would need to be relocated in Phase 2. 	<ul style="list-style-type: none"> ❖ During the final design effort for Phase 2, the location of all utilities in the corridor will be confirmed by field investigations, including locating lines below ground. Alternate delivery systems will be provided to ensure uninterrupted service, and lines or stations will be relocated as needed. When appropriate, CDOT will look for opportunities to provide space for new utilities or upgrade existing ones. If, during future design efforts, impacts to potentially historic utility lines are identified, CDOT will engage in Section 106 consultation with the SHPO and consulting parties regarding the resource. ❖ CDOT will negotiate an agreement—through purchase of either a temporary or a permanent easement—from the Bessemer Ditch Company for construction of the new roadway structure over the irrigation ditch in Phase 2. ❖ CDOT will coordinate with Evraz Rocky Mountain Steel Mill during final design to confirm the location of coolant water lines and identify appropriate alternate delivery systems for cooling as needed.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
ENERGY	
<ul style="list-style-type: none"> ❖ On a daily basis, the difference in energy use between Phase 2 of the Preferred Alternative and the No Action Alternative is negligible. ❖ Construction of the 54.10 total lane miles for Phase 2 requires 1,330,600 million Btu(s). Additional energy (approximately 14,500 million Btu(s)) would be expended as a result of project phasing and the need to reconstruct portions of the project during later phases. 	<ul style="list-style-type: none"> ❖ To the extent practical, CDOT will implement sustainability practices into the project planning, construction, and maintenance to reduce energy use. Mitigation measures are described in more detail in Section 3.17 Energy.
NOXIOUS WEEDS	
<ul style="list-style-type: none"> ❖ Ground disturbance and other construction activities in the project area could expand areas already infested with noxious weeds, spread weeds to adjacent land and wetland and riparian habitats nearby, and introduce new weed species to the project area. Construction activities in the project area would cause vegetation removal and ground disturbance. ❖ The potential for the spread of invasive species would increase as a result of a longer construction period required phasing and the need to redisturb land when portions of the project are reconstructed in later phases. 	<ul style="list-style-type: none"> ❖ Prior to the start of construction activities for Phase 2, CDOT will develop and implement a Noxious Weed Management Plan that incorporates herbicides, mechanical removal, and potential biological controls (in accordance with the Colorado Noxious Weed Act) to control and prevent weed infestation and spread. CDOT will provide the Noxious Weed Management Plan to CPW for review prior to its completion. During construction, standard BMPs (described in more detail in Section 3.18 Noxious Weeds) will be used to observe, treat, control, and/or remove noxious weeds from the disturbed area in accordance with the Noxious Weed Management Plan. After construction, disturbed areas will be reclaimed immediately and CDOT ROW will be managed through standard CDOT maintenance operations. All construction equipment will be washed thoroughly. ❖ Certified weed-free seed mixes and straw bales for use in stormwater management and erosion control will be specified in the construction plan sets.
PALEONTOLOGICAL RESOURCES	
<ul style="list-style-type: none"> ❖ Phase 2 would not affect any known significant paleontological resources. 	<ul style="list-style-type: none"> ❖ If any fossils or other paleontological resources are found anywhere in the project area during construction, construction activities will be halted and the CDOT staff paleontologist will be contacted immediately to assess the significance of the find and make further recommendations.
SOILS AND GEOLOGY	
<ul style="list-style-type: none"> ❖ Phase 2 construction activities have the potential to encounter unstable soils or geologic hazards that would require mitigation prior to construction. 	<ul style="list-style-type: none"> ❖ A detailed geotechnical and soils analysis of the subsurface will be performed during final design for each phase.

EXHIBIT 5-4**Environmental Impacts and Mitigation Measures by Resource Associated with Phase 2**

Impacts	Mitigation
SECTION 4(f) RESOURCES <ul style="list-style-type: none"> ❖ Phase 2 would impact 16 of the 39 Section 4(f) resources impacted by the Preferred Alternative: 11 historic properties, 2 historic districts (Steelworks Suburbs and Grove), 1 park (Benedict Park), and 2 recreational areas (the Arkansas River Corridor and the Runyon/Fountain Lakes State Wildlife Area). FHWA has made a preliminary determination that there is no feasible and prudent avoidance alternative to the use of Section 4(f) property for the Preferred Alternative, as demonstrated in Chapter 4 – Section 4(f) Evaluation. Phase 2 impacts to Section 4(f) properties are, therefore, unavoidable. The Preferred Alternative incorporates all possible planning to minimize harm to Section 4(f) properties to the extent possible at the DEIS level of project design and development. 	
	<ul style="list-style-type: none"> ❖ To alleviate forecasted noise from I-25, noise walls will be constructed. Mitigation measures are described in more detail in Section 3.5 Noise. ❖ CDOT will provide advance notice to the public of temporary detours and/or closures of the Arkansas River Trail during construction. Access will be maintained as much as possible to minimize impacts to users. ❖ Mitigation for impacts to Benedict Park includes a new 3.93-acre to 4.30-acre Benedict Park to be built south of the existing park location between Mesa Avenue and Northern Avenue using remnant parcels of land resulting from changes in the roadway network. Mitigation measures are described in more detail in Section 3.3 Parks and Recreation. ❖ The pedestrian bridge over the Arkansas River would be relocated just east of the proposed Stanton Avenue bridge to allow room for the new bridges that will span the river east of the current I-25 alignment in Phase 2. The Arkansas River Trail would be relocated over the new pedestrian bridge. Mitigation measures are described in more detail in Section 3.3 Parks and Recreation. ❖ A Programmatic Agreement has been developed by FHWA, CDOT, and the SHPO to outline mitigation for adverse effects to historic properties. The Programmatic Agreement identifies specific categories of mitigation for further consultation and investigation, including resource relocation, interpretive mitigation, and archival documentation. Mitigation measures are described in more detail in Section 3.2 Historic Properties and Appendix H. ❖ Final mitigation measures for historic archaeological resources will be formalized in the Programmatic Agreement, as described in Section 3.2 Historic Properties and Appendix H.

¹ Section 6(f)(3) assisted properties include parks and recreational facilities that have been acquired through the use of grants from the Land and Water Conservation Fund (LWCF) Act of 1965. Section 6(f) of the LWCF Act ensures that federal investments in the LWCF are maintained for public outdoor recreational use. The LWCF Act requires that, prior to conversion of Section 6(f)(3) assisted property, the agency proposing the conversion must evaluate all practical alternatives to the conversion and identify adequate replacement property.

ACM = asbestos containing materials

BFE = base flood elevation

BMP = best management practice

Btu = British thermal unit

CDOT = Colorado Department of Transportation

CDPHE = Colorado Department of Public Health and Environment

CDPS = Colorado Discharge Permit System

CPW = Colorado Parks and Wildlife

DEIS = Draft Environmental Impact Statement

DOI = U.S. Department of the Interior

EO = Executive Order

FHWA = Federal Highway Administration

ISA = Initial Site Assessment

LWCF = Land and Water Conservation Fund

MS4 = Municipal Separate Stormwater Sewer System

MSAT – Mobile Source Air Toxics

NAAQS = National Ambient Air Quality Standards

PM₁₀ = particulate matter less than 10 microns

REC = recognized environmental conditions

ROW = right-of-way

SB = Senate Bill

SHPO = State Historic Preservation Officer

USACE = U.S. Army Corps of Engineers

VMT = vehicle miles traveled